

presence of two nasal spines; but it differs in the roughness of the skin (that species being described as smooth), and in the greater inequality of the dorsal fin. Perhaps it may be the same as the species brought from the coast of Chili by Mr. Cuming, and briefly noticed by Mr. Bennett in the "Proceedings of the Zoological Society" (1832, p. 5.), but which this last gentleman did not venture to describe as new, from the circumstance of its general agreement with the *A. Peruvianus*. The principal deviation in Mr. Cuming's fish from the species just mentioned is stated to have occurred in the number of the fin-rays; those of the spinous portion of the dorsal fin being seventeen (one less than in the *A. Peruvianus*), while of the soft rays of the anal there were ten (three more than in the species referred to). Mr. Darwin's fish agrees with Mr. Cuming's in the number of the dorsal spines, but not in that of the soft rays of the anal, which is eight, being one more than in the *A. Peruvianus* and two less than in Mr. Cuming's; and it is observable that both the specimens obtained by Mr. Darwin agree in this particular. Mr. Bennett has not noticed any of the other characters of Mr. Cuming's fish.*

One of the most distinguishing peculiarities in the species here described is the existence of vomerine teeth, which though extremely minute are quite sensible to the touch. As these teeth are denied by Cuvier to the whole genus, we have here another instance, similar to that of the *Aspidophorus Chilensis* already mentioned, of the slight value of the character which their presence or absence affords. Possibly, however, they may disappear in the adult state. Both Mr. Darwin's specimens are small, neither equalling two inches; and if they are immature, which is probably the case, some of the other characters mentioned in the description, perhaps even the hispidity of the skin, may result from this circumstance. They must therefore be received with caution until larger specimens shall have been obtained.

* Since the above was printed, Mr. Waterhouse has been kind enough to show me in the museum of the Zoological Society the specimen which he believes to be the one procured by Mr. Cuming. Unless the characters are very much altered by age, it is decidedly distinct from the *A. hispidus* above described. The general form indeed is the same; but the skin is perfectly smooth, marked with vertical striæ; the granulated ridges on the head are less prominent, and the superciliary ridges without spines. The fin-ray formula is not quite as stated by Mr. Bennett, who appears, in his computation, to have mistaken the last dorsal spine for one of the soft rays of that fin, and also to have over-estimated the number of soft rays in the anal. The formula is really 18/12; A. 1/3, &c. I have no doubt of Mr. Cuming's fish being the true *A. Peruvianus*; whilst the one here characterized as new is probably the young of a nearly allied species. Mr. Cuming's specimen is six and a half inches long.

It may be advantageous to science to mention here, though not immediately connected with the present inquiry, that another species of *Agriopus* in the museum of the Zoological Society, which was seen by M. Valenciennes during his visit to this country, and referred by him in the "Histoire des Poissons" to the *A. verrucosus*, proves not to be that species, but the *A. spinifer* of Dr. Smith, recently described by him for the first time in his "Illustrations of the Zoology of South Africa."

FAMILY.—SCIENIDÆ.

OTOLITHUS GUATUCUPA. Cuv. et Val.

Otolithus guatucupa, Cuv. et Val. Hist. des Poiss. tom. v. p. 56. pl. 104.

FORM.—Elongated, with the back only very slightly elevated beneath the first dorsal: in advance of that fin the dorsal line is nearly straight, and continuous with the profile. Greatest depth contained exactly four times and a half in the entire length. Head long, contained three and a half times in the same. Lower jaw projecting considerably beyond the upper, and ascending to meet it. Two strongly developed curved canines at the extremity of the upper jaw; the rest of the teeth in this jaw consist of a single row of fine card, nearly equal throughout: in the lower jaw there are no canines, but one similar row of card, rather stronger than those above, and not equal, the smallest being in front, and those at the sides becoming gradually larger as they extend backwards. No vestige of scales on the lower jaw, lips or maxillary; but the suborbital is covered with bright silvery scales. Eye full, and moderately sized; its diameter one-fifth the length of the head; its distance from the end of the upper jaw equalling the diameter. Margin of the preopercle with a few indistinct striæ and obsolete denticulations. Opercle with two flat points not much developed. Lateral line very distinct, commencing at rather less than one-third of the depth, but curving gradually downwards to one-half; continued to nearly the extremity of the caudal; each scale marked with an elevated line, from which there proceed one or two small ramifications on each side.

First dorsal triangular, with the first spine very short, the fourth longest, the fifth and succeeding ones gradually decreasing, the last or tenth being shorter than the first. Second dorsal almost contiguous, its spine or first ray about equalling the first ray of the first dorsal: this fin is more than half as long again as the first, and the rays are nearly even. The anal commences further back than a point opposite the middle of the second dorsal; there are in reality two spines in this fin, but the first is so extremely minute as to be almost microscopic, and not seen, unless very carefully sought for; the second or principal spine is weak, and rather more than one-third the length of the soft rays. Caudal apparently square, but the rays being worn at the tips, its exact form cannot be determined. The second dorsal, as well as the anal and caudal, are partially covered with small scales, which, however, are not very obvious. Pectorals narrow and rather small, being scarcely more than half the length of the head. Ventrals placed a little further back, and rather shorter than the pectorals.

B. 7; D. 10—1/20; A. 1/3; C. 17; P. 16; V. 1/5.

Length 9 inc. 9 lines.

COLOUR.—"Silvery white, above iridescent with violet purple and blue."—D. Mr. Darwin has not noticed the dark transverse lines, which descend from the back obliquely forwards, as repre-